

## PATENT CLAIMS

1. A stator assembly having a plurality of stator poles (31-36), said plurality being divisible by six,

a first (31), a second (32), a third (33), a fourth (34), a fifth (35) and a sixth (36) of said stator poles being arranged successively within a predetermined angular range;

three winding phases (70, 72, 74) connected in a delta configuration (FIG. 4);

three respective current rails (U, V, W, 38, 40, 42) associated with respective ones of said winding phases for their connection;

wherein

a first winding coil (51) is arranged on said first stator pole (31) between a first one (38) of said current rails and a second one (40) of said current rails;

a second winding coil (52) is arranged on said second stator pole (32) between said second current rail (40) of said current rails and a third one (42) of said current rails;

a third winding coil (53) is arranged on said third stator pole (33) between said third current rail (42) and said first current rail (38);

a fourth winding coil (54) is arranged on said fourth stator pole (34) between said first current rail (38) and said second current rail (40);

a fifth winding coil (55) is arranged on said fifth stator pole (35) between said second current rail (40) and said third current rail (42); and

a sixth winding coil (56) is arranged on said sixth stator pole (36) between said third current rail (42) and said first current rail (38).

2. The stator assembly of claim 1, wherein

at least two successive winding coils (51, 52) are continuously wound and at their interface (61) are electrically connected to an associated current rail (40) without interrupting their winding wire (44).

3. The stator assembly of claim 2, wherein the winding coils of the first through sixth winding coils are continuously wound and are electrically connected at their respective interfaces (61-65) to respective current rails, without interrupting their winding wires.

4. The stator assembly according to one of the foregoing claims, wherein

at least one of said current rails (38, 40, 42) is configured to interconnect a plurality of interface points (61, 64), said interface points being separated by three intervening stator poles.

5. The stator assembly according to one of the foregoing claims, wherein

there are three stator poles per pole pair of the rotor (22).

6. The stator assembly according to one of the foregoing claims, wherein

said current rails (38, 40, 42) are embedded within an insulating body (44) and are, except for terminals (A-F, U, V, W) of said rails, substantially completely enclosed by said body.

7. The stator assembly according to claim 6, wherein, at a terminating point (A-F, U, V, W), a respective terminal (A, 43) projects out of the insulating body (44).

8. The stator assembly according to claim 6 or 7, wherein a terminal (U, V, W) is connected with a circuit board (47) which is arranged adjacent an outer face of the stator assembly (20).

9. The stator assembly according to claim 8, further comprising

at least one power semiconductor (48) provided on said circuit board (47) for controlling current in a phase (70, 72, 74) of stator windings (45).

10. An electronically commutated DC motor having a stator assembly according to one of the foregoing claims and a permanent magnet rotor (22), wherein

said stator assembly (20) has three stator poles for each pole pair of said rotor (22).